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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/791,790	03/04/2004	Takanori Makino	11-231	5212
23400	7590	08/10/2005	EXAMINER	
POSZ LAW GROUP, PLC 12040 SOUTH LAKES DRIVE SUITE 101 RESTON, VA 20191			LE, DINH THANH	
			ART UNIT	PAPER NUMBER
			2816	

DATE MAILED: 08/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/791,790

Applicant(s)

MAKINO ET AL

Examiner

DINH T. LE

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 3/4/04 & 6/7/05.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## **DETAILED ACTION**

### ***Specification***

The specification has been checked to the extent necessary to determine the presence of all possible minor errors. However, the applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

### ***Claim Objection***

Claims 1-2 and 6-7 are objected to because the preamble and the body are not clearly recited. Correction is required.

### ***Claim Rejections***

#### ***Claim Rejections - 35 USC § 112***

Claims 1-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Correction or clarification is required.

In claim 1, the recitation “said switching elements” on line 11 and “said fixedly predetermined duration” on line 45 lacks clear antecedent basis. The description of the present invention is incomplete because the first, second and third capacitors are not connected to anything and the filter circuit does not have an output. Thus, the claimed filter circuit may not perform the recited unction. It is not understood how the second and third capacitors can be “connected in parallel” under the third condition on line 31, how the immediately succeeding

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transition can be “made” as short as possible and what the “range of a time interval values” on line 51 is. The same is true for claims 2 and 6-7.

In claim 2, it is unclear how the filter can be “configured” as a switched capacitor circuit” on line 2. The same is true for claim 6.

In claim 3, it is not understood what the “semiconductor devices” on line 2 and “predetermined maximum operating temperature” on line 9 are.

In claim 5, it is not understood what the “percentage of stored charge” on line 3, “predetermined maximum permissible value” on line 5 and “percentage error of DC gain” on line 6 are.

The remaining claims are dependent from the above claims and therefore also considered indefinite.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-7 are rejected under 35 USC 103 (a) as being unpatentable over Figure 7 of the applicant’s admitted prior art.

As the best construed, the admitted prior art discloses a filter circuit comprising:

- a first capacitor (C1), a second capacitor (C2) and a third capacitor (C3);
- a plurality of switching elements (S11, S12, S13, S25, S26);

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- a means (30) for generating a first pulse signal (O1) and a second pulse signal (O2);
- an amplifier (OP1) and a differential amplifier (2); and
- a crystal sensor (1);

The admitted prior art does not disclose that the duration of the second condition of the switching elements is made as short as possible within a range of time interval as combined in claims 1 and 6, within a range of values as combined in claims 2 and 7 or within a range extending from 6 microseconds to 2 microseconds as recited in claim 4.

However, a skilled artisan realizes that the circuit of the admitted prior art has the same structure as the claimed circuit and the filtering function of the filter of the admitted prior art can be optimized by controlling the turn-on/off times of the switching elements (S11-S13, S25, S26). Thus, selecting the optimum duration of condition of the switching elements of the admitted prior art as claimed is considered to be a matter of a design expedient for an engineer depending upon a particular environment or the application in which the circuit of the admitted prior art is to be used. *In re Boesch*, 617F.2d 272.205 USPQ 215 (CCPA 1980). Lacking of showing any criticality, it would have been obvious to a person having skill in the art at the time the invention was made to select the optimum duration of the switching condition for the switching elements of the admitted prior art for the purpose of optimizing the filtering function and accommodating with a requirement of a predetermined system.


### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DINH T. LE whose telephone number is (571) 272-1745. The examiner can normally be reached on Monday-Friday (8AM-7PM).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, TIMOTHY CALLAHAN can be reached at (571) 272-1740.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



DINH LE  
Primary Examiner